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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,842	02/23/2004	Adela Mora-Gutierrez	017575.0924 (TAMUS 1492)	1473
29335	7590	02/17/2006	EXAMINER	
ROSENBAUM & ASSOCIATES, P.C. 650 DUNDEE ROAD SUITE 380 NORTHBROOK, IL 60062-2757			ANTHONY, JOSEPH DAVID	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/784,842

Applicant(s)

MORA-GUTIERREZ ET AL.

Examiner

Joseph D. Anthony

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 88-119 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 88-119 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION AFTER FILING OF RCE**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 99-117 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Dependent claims 99-104 and 106-108 are indefinite because due to the preambles of the claims. The preambles of these claims should be changed to read –The composition of Claim #--. Wherein # = the appropriate claim number listed.

Independent claim 105 is indefinite because it cannot be determine what is being claimed. Is applicant claiming a composition that must comprise at least three components namely: 1) phosphopeptide, 2) glycopeptide and 3) glyceride? If so, why does applicant use the modifying phrase “and combinations thereof”? If applicant is not claiming at least a three-component composition than the claim is indefinite because the components “glycopeptide” and “glyceride” are not casein fragments.

Claims 109-117 are being rejected here because they are dependent on a rejected base claim.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 88-90, 93-94, 98-103, 105, 107, 111, 113, 115-116 and 118-119 are rejected under 35 U.S.C. 102(b) as being anticipated by Han et al. U.S. Patent Number 5,834,427.

Han et al teach a purified casein phosphopeptide(CPP) having a novel amino acid sequence and a purified casein including same wherein the 25th Arg from N-terminal in a conventional CPP is replaced by Cys, rendering the CPPs to forming a dimer by disulfide bond. In the corresponding DNA sequence, cytosine is replaced by thymine to cause the amino acid replacement from Arginine(Arg) to Cysteine(Cys). The CPP or the casein containing same has an improved ability of solubilizing minerals and absorbing thereof in animals. The CPP or the beta-casein H containing same can be added to foodstuffs, beverages,

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medication, cosmetics, feed in an effective amount of enhancing a mineral absorption in animals. An oral composition comprising the beta-casein H or the inventive CPP and a pharmaceutically acceptable carrier can reduce or relieve a dentinal hypersensitivity, see abstract, column 1, lines 45-49, column 2, line 66 to column 3, line 43, column 5, lines 10-54, column 6, lines 28 to column 7, line 3, examples, such as example 2 and claims such as claims 11-15. Please note that an admixture of casein phosphopeptide and carrageenan is directly disclosed in column 6, line 67 to column 7, line 3.

6. Claims 95, 104, 106, 108, 114 and 117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han et al. U.S. Patent Number 5,834,427 optionally in view of Antrim et al. U.S. Patent Number 4,963,385 for claim 114.

Han et al. has been described above and differs from applicant's claimed invention only in that there does not seem to be explicit disclosures to applicant's claimed caprine casein phosphopeptide of claims 95, 104, 106 and 108. There is also no direct teaching the addition of adding pH modifiers to achieve a pH from 2.0 to 5.7 as set forth in claim 14. And finally, there is not specific disclose to applicant's particular claimed "artificial" fruit concentrate sweetener of claim 117.

Antrim et al. teach food emulsions containing highly unsaturated fatty acids or derivatives thereof are stabilized against oxidative attack upon the unsaturated components by using a stabilizer system in the water phase of the emulsion which comprises either a sugar or sugar alcohol or a sugar or sugar

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alcohol and a metal-ion chelator, see abstract, column 1, lines 30-38, column 2, lines 20-59, column 3, line 15 to column 4, line 29. Please note that in column 3 line 48 to column 4, line 29 various chelating agents are disclosed such as citric acid. Also note that in the Table in column 3, compositions are taught within applicant's claimed pH range.

It would have been obvious to one having ordinary skill in the art to use the broad disclosure of Han et al as motivation to actually make and use applicant's claimed caprine casein phosphopeptide of claims 95, 104, 106 and 108 because such are deemed to come within the broad disclosure of casein phosphopeptides produced by trypsin hydrolysis as set forth in Example 2.

It would also have been obvious to one having ordinary skill in the art to further add pH modifiers to applicant's claimed composition using the disclosure of Han et al since such pH modifiers are deemed to be extremely well known components of the various composition into which Han et al. casein phosphopeptides are added, see column 6, lines 28 to column 7, line 7 of Han et al for such type compositions. In the alternative Han et al can be combined with the disclosure of Antrim et al to the further addition of citric acid chelating agents/pH modifiers to make stabilized food emulsions having a pH that encompasses applicant's claimed pH, as motivation to actually add citric acid to Han et al. composition both as a chelating agent stabilizer and as a pH modifier to make an acidic composition.

Finally applicant's claimed "artificial" fruit concentrate sweetener of claim 117 is deemed to be obvious over Han et al's broad disclosure to "artificial juices set forth in column 6, lines 38-39 of Han et al. In any case applicant's have set forth no showing of any superior or unexpected results for their particularly claimed "artificial" fruit concentrate sweetener.

7. Claims 91-92, 96-97, 109-110 and 112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han et al. U.S. Patent Number 5,834,427 optionally in view of Buikstra et al. U.S. Patent Number 5,650,190 or MUSHER U.S. Patent Number 2,282,815.

Han et al has been described above and differs from applicant's claimed invention in that there is no explicit disclosure that the compositions to which casein phosphopeptides maybe added to may comprise medium-chain triglycerides and/or phospholipids.

Buikstra et al who teaches heat stabilized food oil-in-water emulsions of unsaturated oils that comprise medium-chain triglycerides, see abstract, column 3, lines 40-45 and example 6.

Musher teaches stabilization of food type water and oil emulsions containing highly unsaturated oils by using the following stabilization systems: 1) a sugar (e.g. sucrose, maltose, lactose), 2) non-aromatic nitrogen compounds such as casein (which comprises phosphopeptide units) or gelatin (which comprises phosphopeptide units), and/or 3) phosphatide = phospholipids (e.g.

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lecithin and cephaline), and 4) optional other adjuvents, see page 1, column 1, lines 1-55 and page 1, column 2, lines 1-37, and page 3, column 2, lines 34-70.

It would have been obvious for one having ordinary skill in the art to actually use medium-chain triglycerides in Han et al's composition to which the casein phosphopeptides are added since they are deemed to come within the broad disclosure of the patent's column 6, lines 28-41. In the alternative, the addition of medium-chain triglycerides to Han et al's composition to which the casein phosphopeptides are added is deemed to be very obvious over the disclosure of Buikstra et al who teaches heat stabilized food oil-in-water emulsions of unsaturated oils that comprise medium-chain triglycerides, see abstract, column 3, lines 40-45 and example 6.

It would also have been obvious to one having ordinary skill in the art to add phospholipids, such as lecithin or part hydrolyzed lecithin, (which may be derived from egg yolks or soybeans since such sources for phospholipids are extremely well known in the art,) to the food products of Han et al. In any case such an addition is obvious in light of the disclosures of either Buikstra et al or Musher's. In any case, applicant has not shown that the source from which phospholipids are derived imparts a patentable distinction.

8. Claims 88-119 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buikstra et al. U.S. Patent Number 5,650,190 or Antrim et al. U.S. Patent Number 4,963,385, both patents in view of Han et al. U.S. Patent Number 5,834,427.



All said patents have been described above. Buikstra et al and Antrim et al. differ from applicant's claimed invention in that there is not an explicit disclosure to the addition of applicant's claimed casein phosphopeptides to the food compositions/emulsions that these patents disclose.

It would have been obvious to one having ordinary skill in the art to use the disclosure of Han et al to the advantageous incorporation of casein phosphopeptides into food products, as taught by Han et al. for the purpose of increasing the beneficial absorption of calcium into the body of animal/people, as motivation to actually add such casein phosphopeptides to the food compositions taught by Buikstra et al and Antrim et al.. Please note that this addition of casein phosphopeptides is especially obvious over Buikstra et al since Buikstra et al directly teaches that hydrolyzed proteins, such as casein are used in Buikstra et al. invention, see column 3, lines 7-33. Also note that Example 1 which teaches the process of enzymatic hydrolysis of lecithin used calcium chloride as a component in the process. It can be expected that the enzymatic hydrolysis of casein could also use calcium chloride as a component in the process.

### ***Response to Arguments***

9. Applicant's arguments with respect to the claims that were finally rejected have been considered but are moot in view of the cancellation by applicant of all such claims and the new ground(s) of rejections as set forth above in this office action.

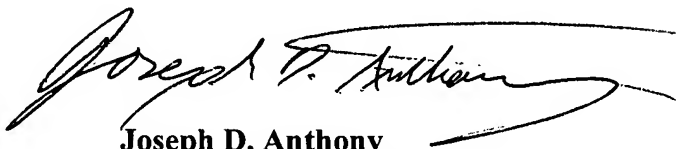
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***Prior-Art Cited But Not Applied***

10. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

***Examiner Information***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (571) 273-8300. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.

  
Joseph D. Anthony  
Primary Patent Examiner  
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2/15/06